Karen Muskavitch's Commentary on "To Review or Not: Reviewing the Competition"

Commentary On
To Review or Not: Reviewing the Competition

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Case Overview

In this commentary, I will restrict my comments to the topic of the peer review of a manuscript submitted to a scientific journal for publication. As noted in the preceding commentary, there are now clearly articulated procedures designed to minimize problems with confidentiality and conflict of interest in the review of grant proposals submitted to the NIH or NSF. There is far less explicit guidance or uniformity on these issues in the context of manuscript review.

For example, in their book on *Ethics and Policy in Scientific Publication*, the Editorial Policy Committee of the Council of Biology Editors report journal editors' responses to a number of scenarios dealing with scientific publishing. One of these scenarios concerned a reviewer who, without the editor's knowledge, routinely asked members of a research seminar to carry out group reviews of the manuscripts he received because of the educational value of this exercise. While "most of the respondents felt that the reviewer's practice was wrong" and one wrote, "Using someone else's

work as a teaching exercise before it has been published is a violation of confidentiality," some respondents "did not object to the reviewer's practice." One wrote: "I agree with the reviewer. Such a procedure can have educational value. The reviewer should take responsibility for the comments, if he or she has compiled and edited them. The author should be grateful for the additional feedback." (Editorial Policy Committee, Council of Biology Editors, 1990, pp. 88-89)

Because of this variability, it is important for scientists to know that confidentiality and conflict of interest can be problems when reviewing a manuscript, that they consider these issues in advance, that they develop their own standards and guidelines, and that they make sure that they check each journal's policies.

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Confidentiality and Conflict of Interest

In the context of pre-publication review of research results, confidentiality does not require complete secrecy. After all, the authors have discussed the results among themselves and in their research group(s), they have submitted them to the editorial board of a journal, and they may very well have presented some or all of the results in talks at their institution(s) and at scientific meetings. Rather, what is important is the authors' control of the information. Authors have the reasonable expectation that they are the ones who control who knows what and when concerning their work, and that editors will not widely distribute their manuscript during the review process. This expectation then extends to the individual reviewer.

In this case study, conflict of interest refers to interests that the reviewer may have that could bias the reviewer's judgment. Conflict of interest in a scientific context has been said to refer to "any conflict between research or other professional scientific judgments and financial or personal interests where acting with disregard to that conflict by placing one's personal or financial interests ahead of professional interests compromises or detrimentally influences professional judgment in conducting or reporting research." (Werhane and Doering 1997, 169-170)

And, of course, the review process is part of reporting research. In this context, it is also important to remember that the perception of a conflict of interest can be as potentially harmful as an actual conflict whether or not one's professional judgment

is influenced. Disclosure is critical, and management and/or avoidance are very important.

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Phase 1

Optimally, the editor in this scenario would have contacted Slater before sending the manuscript, to determine whether Slater had time to do the requested review and whether any potential problems existed. However, despite the advent of E-mail, many editors just put the manuscript in the mail; the potential reviewer learns of the assignment only when he/she opens the envelope. So one could ask, when, in the process of looking over the manuscript, should Slater start to hear little alarm bells going off in his head? Regardless of how little he reads, his actions will be changed by what he finds in that envelope. Seeing the title and author(s), he knows that the competition is ahead of him and that Parker is at risk of being scooped. One can argue that he probably is already aware of the situation from meetings and the gossip network of science. Even if that is the case, seeing it in print is indisputable evidence. By the time Slater reads through the abstract, he can be sure that others have already done what he and Parker are working on. Reading any further will only further complicate the situation.

Because of potential problems with a conflict of interest, which, although it is not financial, could bias his judgement, he should contact the editor who sent him the manuscript as soon as possible, and preferably before carefully reading the entire manuscript. An alternative would be to insert a note declining the editor's request to review the manuscript because of a conflict of interest, taping the envelope shut to avoid temptation, and returning it to the editor immediately. However, this alternative seems a bit extreme, although not ethically objectionable. What Slater needs is to obtain an outside opinion concerning his ability to be objective in his review. The editor is the best person to consult because confidentiality will be maximized, and Slater also needs to disclose the potential conflict of interest. Slater should not show the manuscript to a colleague and ask whether he/she thinks he should go ahead with the review, and he can't rely on his own potentially biased judgment to determine whether he can be objective.

Of course, the editor knows that Slater works in the same area as the authors of the manuscript. If that were not the case, the editor never would have asked Slater to review it. However, the editor may not be aware of how close this work is to Slater's own, nor may the author(s), who might otherwise have asked that Slater not review the manuscript. The editor needs to be contacted and made aware of the details of the situation. It is entirely possible that the editor may still think that Slater is the best choice as one of the reviewers, but now the conflict has been disclosed and the editor can factor this information into his/her weighing of Slater's review. Editors are frequently scientists who do research in the same area as the authors and reviewers of the manuscripts they handle; they may have some personal knowledge of the reviewer's reputation and past behavior to draw on.

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Phase 2

Slater has decided not to consult with the editor and just to go ahead with his review. He also decides to ask Parker's opinion of the manuscript since she is the one who has the greatest expertise. It might be interesting to modify the scenario a bit and explore whether changes in what Slater tells or shows Parker change one's conclusion regarding the appropriateness of his action. For instance, Slater could have asked Parker for her opinion on a small part of the paper without actually showing her the manuscript or telling her why he was asking. Or he could have shown her only a portion of the manuscript, perhaps the Results section but not Methods. As the case is written, he simply gave her the complete manuscript saying something like, "I've been asked to review this for the *Journal of Cool Results*. Since you probably know more about this topic than I do, would you look it over and give me your opinion of it?"

Question 1. It is not easy to determine whether Slater should have shown the manuscript to Parker in any circumstances, with or without the editor's permission. Conflict of interest is involved as well as confidentiality. As soon as Slater tells Parker about the manuscript or shows it to her, she has new information that will affect her behavior, just as was the case for Slater opening that envelope in Phase 1. It is likely that she will push harder to finish her experiments and prepare her own manuscript. However, while Slater was able to choose how far he read, and thus how much he

knew about the competition, before he stopped and possibly contacted the editor, Parker has less freedom to choose. Unless she interrupts Slater while he is telling her about the manuscript (and few grad students would do that), she will know whatever he decides to tell her. Once Slater asks her to read the manuscript, it may be difficult for Parker to tell her adviser that she doesn't think she should read it, even assuming she is aware that there could be a problem.

Thus, Parker is pulled into an awkward situation through no fault of her own, but rather through Slater's decision. By showing the manuscript to Parker, Slater has placed her in a very difficult conflict of interest and has breached the confidentiality of the review process. How much is her judgment to be trusted in evaluating a manuscript that would scoop publication of her own dissertation work? How can she ignore the information she now has, including new ideas on techniques or materials to try in purifying her protein? The former is a conflict of interest concern, the later is a change in the situation due to the breach of confidentiality.

As mentioned in the overview of the case, the scientific and editorial community exhibits some disagreement regarding the propriety of consulting others while preparing a review. Given this uncertainty, it would be best to consult the editor first to determine the policy of the journal, and to seek his/her approval for the proposed course of action. At the very least, the editor needs to be informed of Parker's participation so that the editor can appropriately evaluate the review that he/she receives.

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Question 2. If a graduate student is to be involved in a review, he/she needs to be made aware of the obligation of confidentiality incumbent upon prepublication reviewers. This information is not intended for dissemination during lunch with other students, nor over the Internet. Faculty members should be familiar with the conventions of confidentiality, and that would be the major difference between consulting a colleague rather than a grad student. Another difference would be that faculty members have higher standing in the scientific community and so might be better able to weather any storm associated with the review of this manuscript by Slater, a close competitor of the author(s).

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Phase 3

Now we come to the question of what Slater and Parker should do with the insight into their own research insight they have gained by reading their competitors' manuscript. They have learned that another group managed to purify the recombinant form of the protein growth factor, a problem whose solution has eluded Parker so far. But note that the case does not say that Parker has tried everything she can think of. Rather, she is in the process of troubleshooting the protocol. It seems that she has a number of ideas that she is checking, and she may even be planning to try a technique similar to that reported in the manuscript. So it is not clear how critical the acquired information is to her progress. The case also indicates that the purification of the protein is not an experimental test of the model Slater and Parker propose, but is more analogous to the preparation of a necessary reagent for a critical experiment.

However, Slater and Parker did not suddenly and unexpectedly find themselves in possession of information concerning the purification protocol. They should have expected to find that information in the paper. In fact, were I in Parker's situation reading anything other than a prepublication manuscript, it is the first thing I would check. Besides, completing a thorough review would require them to read and evaluate the protocol. So the knowledge of the competitors' protocol should have been expected, and it was gained during the review process. Now what should they do with the information?

The case indicates that Parker and Slater successfully used the competitors' protocol as presented in the manuscript, and that they were then able to finish the work and publish in the *Journal of Cool Results* -- quite possibly ahead of the competitors whose manuscript they reviewed. Even assuming that their recommendation against publication was justified and that the other reviewer(s) agreed with their evaluation, there is certainly the appearance of impropriety here, and quite possibly more (see Question 2 below).

Question 1. Parker should not have used the competitors' protocol step-by-step for a number of reasons. First, on a practical level, doing so obligates her to cite the source for the technique, which is very difficult in this situation. Failing to cite the source would be improperly claiming someone else's work as her own, a type of plagiarism. Writing the citation as "Competitor, et al., unpublished results" will not

work, because most journals will not allow citation of unpublished work without written permission. Second, using the protocol breaches the trust placed in a peer reviewer: Slater and Parker are deriving personal benefit from the use of privileged information. Finally, the competitor(s) and/or others familiar with their work will probably be asked to review Slater and Parker's manuscript, and they will recognize their protocol and figure out what happened.

Some might argue that because the purification protocol is not a test of the proposed model and because it has no substantive scientific relevance to Slater and Parker's conclusions, its use is not an issue. Others might argue that Parker could have planned to try a procedure very similar to the competitors' before seeing their manuscript, and thus she did not steal their ideas or gain an unfair advantage. What is most important for this question is to determine the criteria for evaluating possible courses of action. What are the probable consequences; the possible benefits and possible harms to Parker, the competitors and others who might be affected by this situation? What are Parker and Slater's obligations? What values and principles are important in such a situation, and which courses of action are consistent with them?

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Question 2. This question is very practical: How can Slater and Parker possibly ignore what they now know? Is it even ethical to try to do so? Should Parker continue with her troubleshooting, trying everything but the particular column, for instance, that her competitors used in the hope that she will find something else that will work? Wouldn't that be a waste of time and money, probably federal money? Frequently, people will justify taking some questionable shortcut as the right thing to do because it will maximize the benefit for science or society. One must examine these situations closely to determine whether the "good of science" is not really in fact "the advancement of my scientific career."

As noted the situation for Slater and the competing group changed as soon as Slater opened that envelope and read the title of the manuscript. The more he and then Parker read, the greater the danger that trust in the peer review process would be damaged. That is why I conclude that the editor must be contacted as soon as possible and informed that Slater will be talking with the competing group either as the manuscript is on its way back to the editor, or as soon as the review is completed. This approach has potential problems, but I believe that the potential harms can be minimized by open, frank communication among the affected parties

(see Question 4), and the editor needs to be informed of Slater's plan. One hopes that the editor will endorse it.

Question 4. Contact with the competitors seems to be required to avoid a potentially nasty situation when Slater and Parker eventually publish and the competitors wonder if some of their ideas were appropriated during the review process.

Contact could be initiated in a number of ways, and the two groups could agree to a number of arrangements. For instance, instead of being open about why she was contacting them, Parker could indicate that she heard through the grapevine that the competitors were working on a similar purification and ask them to give her information about their results -- for which she would cite them, of course. It seems that a more honest approach might work better, but that may depend on the history of interactions between these groups. Having made contact, the two groups might simply agree to cite each other, or perhaps they will agree to publish back-to-back in the *Journal of Cool Results*. They might even agree to a formal collaboration. A discussion and evaluation of various ways one might contact and cooperate with a competitor would be a useful way to conclude a discussion of this case.

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